



## ***Life Cycle Sustainment Integration***

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# Overview

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- ☐ **Program Funding Chart**
- ☐ **Sustainment Quad Chart**
- ☐ **O&M and O&S Crosswalk Chart**
- ☐ **Portfolio Data Chart**
- ☐ **Life Cycle Sustainment Integration**

Program Funding & Quantities			Acquisition to O&S Cost Ratio					(BY yyyy)	Curr Est	Δ Current	Δ Original
			Total Required Acq (BY\$M):		4,465	30%		PAUC:	55.7M	+4.6%	+10.2%
			Total Required O&S (BY\$M):		10,358	70%		APUC:	50.4M	-3.2%	+60.2%
(\$ in Millions / Then Year)	Prior	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY13-17	To Comp	Prog Total
<b>RDT&amp;E</b>											
Prior \$ (PB 12)	108.0	32.4	44.2	45.1	37.9	12.4	5.3	-	100.8	-	285.4
Current \$ (POM 13)	108.0	32.4	44.2	45.6	38.3	12.5	5.4	-	101.8	-	286.4
Delta \$ (Current - Prior)	-	-	-	0.5	0.4	0.1	0.1	-	1.0	-	1.0
Required <sup>1</sup> \$	108.0	32.4	44.2	45.6	46.0	15.0	6.5	-	113.0	-	297.6
Delta \$ (Current - Required)	-	-	-	-	(7.7)	(2.5)	(1.1)	-	(11.2)	-	(11.2)
<b>PROCUREMENT</b>											
Prior \$ (PB 12)	-	99.9	150.4	200.2	304.8	618.6	627.6	-	1,751.2	2,257.3	4,258.8
Current \$ (POM 13)	-	99.9	150.4	203.1	309.2	522.9	530.5	538.1	2,103.8	1,954.5	4,308.6
Delta \$ (Current - Prior)	-	-	-	2.9	4.4	(95.7)	(97.1)	538.1	352.5	(302.7)	49.8
Required \$	-	99.9	150.4	203.1	312.3	528.1	535.8	543.5	2,122.8	1,974.1	4,347.1
Delta \$ (Current - Required)	-	-	-	-	(3.1)	(5.2)	(5.3)	(5.4)	(19.0)	(19.5)	(38.6)
<b>MILCON</b>											
Prior \$ (PB 12)	-	-	1.3	1.6	-	2.1	2.3	-	6.0	15.3	22.6
Current \$ (POM 13)	-	-	1.4	1.7	-	2.0	2.1	3.0	8.8	12.6	22.8
Delta \$ (Current - Prior)	-	-	0.1	0.1	-	(0.1)	(0.2)	3.0	2.8	(2.7)	0.2
Required \$	-	-	1.4	1.7	-	2.0	2.1	3.0	8.8	12.6	22.8
Delta \$ (Current - Required)	-	-	-	-	-	-	-	-	-	-	-
<b>Weapon System O&amp;M<sup>2</sup></b>											
Prior \$ (PB 12)	-	6.1	8.3	10.4	26.5	37.8	55.0	-	129.7	-	144.1
Current \$ (POM 13)	-	6.1	8.3	11.4	29.2	41.6	60.5	98.6	241.2	-	255.6
Delta \$ (Current - Prior)	-	-	-	1.0	2.7	3.8	5.5	98.6	111.5	-	111.5
Required \$	-	6.1	8.3	11.4	29.2	41.6	60.5	98.6	241.2	5,904.8	6,160.4
Delta \$ (Current - Required)	-	-	-	-	-	-	-	-	-	(5,904.8)	(5,904.8)
<b>TOTAL</b>											
Prior \$ (PB 12)	108.0	138.4	204.2	257.3	369.2	670.9	690.3	-	1,987.7	2,272.6	4,710.9
Current \$ (POM 13)	108.0	138.4	204.3	261.8	376.6	579.0	598.5	639.7	2,455.6	1,967.1	4,873.4
Delta \$ (Current - Prior)	-	-	0.1	4.5	7.4	(91.9)	(91.8)	639.7	467.9	(305.4)	162.5
Required \$	108.0	138.4	204.3	261.8	387.4	586.7	604.9	645.1	2,485.8	7,891.4	10,828.0
Delta \$ (Current - Required)	-	-	-	-	(10.8)	(7.7)	(6.4)	(5.4)	(30.2)	(5,924.3)	(5,954.6)
<b>QUANTITIES<sup>3</sup></b>											
Prior Qty (PB 12)	-	2	3	4	6	12	12	-	34	41	80
Current Qty (POM 13)	-	2	3	4	6	10	10	10	40	35	80
Delta Qty (Current - Prior)	-	-	-	-	-	(2)	(2)	10	6	(6)	-
Required Qty	-	2	3	4	6	9	9	9	37	38	80
Delta Qty (Current - Required)	-	-	-	-	-	1	1	1	3	(3)	-

Note 1. Requirement Source: [e.g., OSD CAPE ICE, Oct 2011]

Note 2. O&M requirement assumes [e.g., a service life to 2035; includes ctr field mx, petro/oil/lube, spare/repair parts, depot mx, sustaining engineering & software mx.]

Note 3. Quantities in FY11-12 were funded with RDT&E

Product Support Strategy

Sustainment Approach

- Current (initial CLS covering total system)
- Future (sub-system based PBL contracts)

Issues

- Shortfall in O&M funding in FYDP
- Reliability and availability estimates are below goals
- LCSP requires update before DAB

Resolution

- POM request for O&M restoration submitted
- Reliability improvement plan with clear RAM goals up for final signature
- LCSP in draft

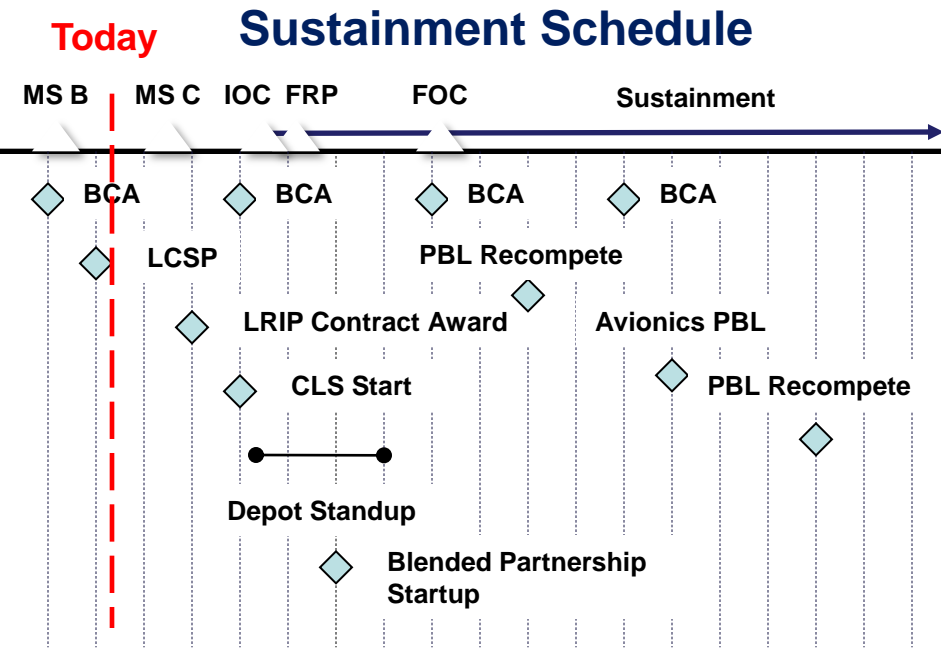
Metrics Data

Metric	Antecedent Actual	Original Goal	Current Goal	Current Estimate/ Actual
Materiel Availability	76%	80%	77%	69%
Materiel Reliability	37 hrs	50 hrs	50.5 hrs	48 hrs
Ownership Cost	\$7.6B	\$9.8B	\$10.4B	\$10.4B
Mean Down Time	12 hrs	20 hrs	18 hrs	15 hrs

\* Test or fielding event data derived from \_\_\_\_\_

Notes:

Sustainment Schedule



O&S Data

Cost Element	Antecedent Cost	ABC Original Baseline	ABC Current Cost
1.0 Unit-Level Manpower	175.5	139.4	158.7
2.0 Unit Operations	102.1	143.0	143.0
3.0 Maintenance	30.2	47.5	52.4
4.0 Sustaining Support	98.1	127.7	127.7
5.0 Continuing System Improvements	32.6	76.3	86.0
6.0 Indirect Support	38.9	80.8	79.6
Total	\$477.4	\$614.7	\$647.4

Cost based on average annual per system in BY\$K

Total O&S Costs	Antecedent	ABC
Base Year \$M	\$7,638.1M	\$10,358.3M
Then Year \$M	\$8,936.6M	\$12,749.9M

## ABC Program, Milestone X - O&M and O&S Crosswalk Chart

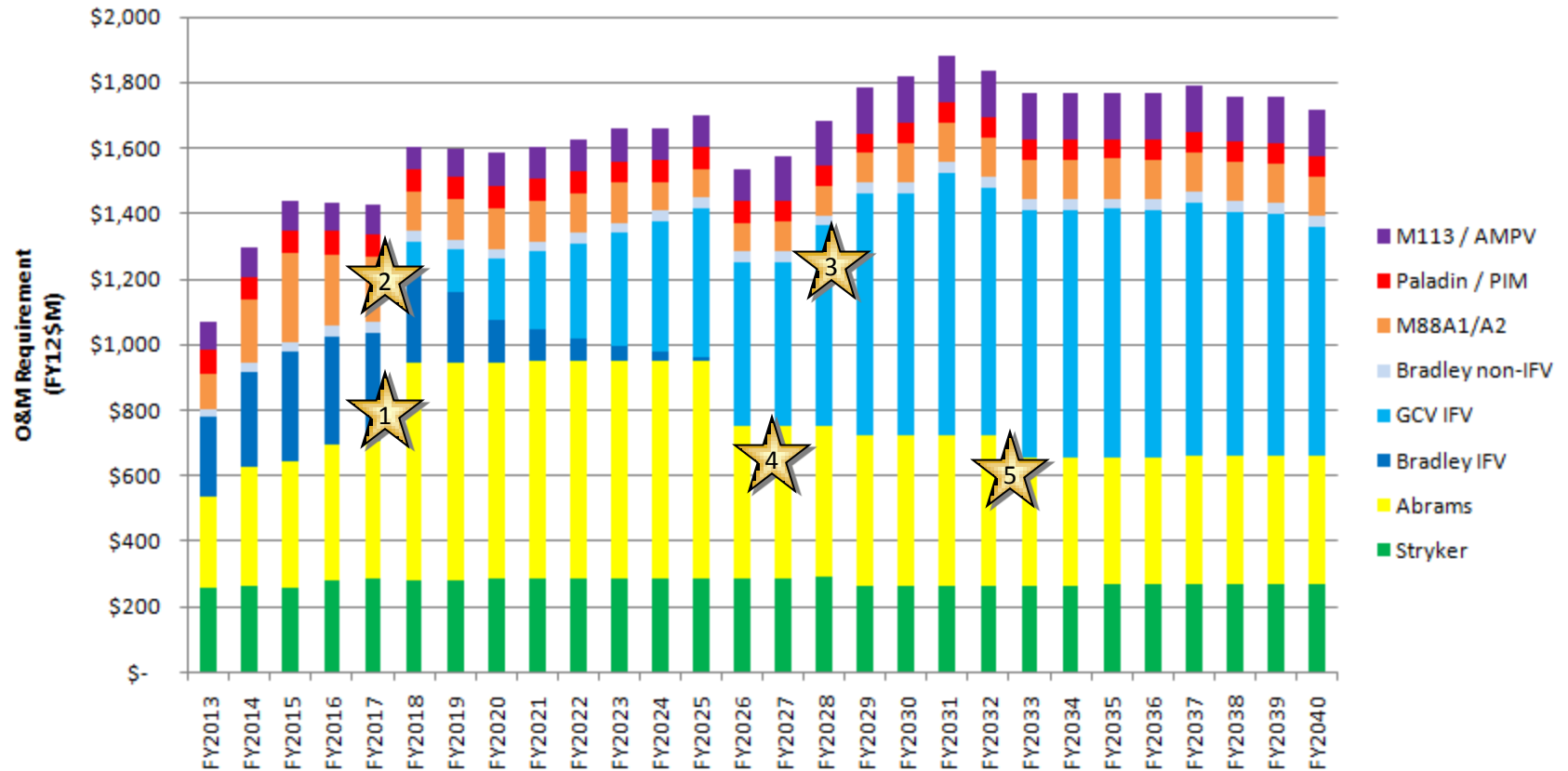
Program Funding & Quantities (O&M) vs. Sustainment Quad (O&S)

	Program Funding & Quantities Chart	Sustainment Quad Chart
<b>Purpose of Chart</b>	<b>Assess O&amp;M Affordability</b>	<b>Assess O&amp;S Cost</b>
<b>Terms of Reference</b>	<b>Weapon System Total O&amp;M (TY \$M)</b>	<b>Total O&amp;S Cost (TY \$M)</b>
Quantity of Assets Included in the Analysis <sup>/1</sup>	80 <sup>/2</sup>	80 <sup>/2</sup>
Unit Level Manpower (OSD CAPE Element: 1.0) <sup>/3</sup>		3058.5M
Unit Operations - Energy (2.1.1)	919.1M	919.1M
Unit Operations - Support Services; TAD/TDY (2.2)		1953.9M
Maintenance (3.0)	1010.0M	1010.0M
Sustaining Support (4.0)	1595.9M	1595.9M
Sustaining Support - System Specific Training (4.1)		942.7M
Continuing System Improvements - HW Maint and Mods (5.1)	1061.5M	1061.5M
Continuing System Improvements - SW Maint and Mods (5.2)		634.4M
Indirect Support (6.0)	1573.9M	1573.9M
<b>Total Cost</b>	<b>\$6,160.4M</b>	<b>\$12,749.9M<sup>/4</sup></b>

### **Notes:**

1. Indicate the planned system life cycle; this example assumes a 20 year system life cycle.
2. Quantity of systems; indicate any differences between the Funding and Sustainment charts.
3. Use the CAPE cost estimating structure; expand elements as necessary to highlight sub-elements.
4. O&S cost potentially includes RDT&E, Procurement, O&M, MILPERS and MILCON, funded activities.  
In this example the \$12,749.9M O&S = \$6160.4M (O&M) + \$634.4M (Procurement) + \$5955.1M (MILPERS).
5. Indicate cost source, e.g. CAPE Independent Cost Estimate for "ABC Program," Milestone X, October 10, 2011.

## Estimated Combat Vehicle O&M Requirements



1. Abrams SEP Recap beginning FY16-17, going to 2 BCT/year FY18-25
2. GCV enters CV Fleet; OPTempo only until FY28
3. GCV Overhauls begin at 1BCT/year FY28; 2 BCT/year FY29+
4. Abrams AIM Recap at 1 BCT/year
5. Abrams sustainment (overhaul only)

### O&M Data Included:

- OPTempo (Active Army only)
- Depot Maintenance (Overhauls, Recapitalization, PPSS)
- SSTS





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# Questions





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# Back-Up



# Acquisition to O&S Cost Data

Summary Views

- Earned Value
- DAES Activity
- Acquisition Documents
- PDF Report

Data Section

- Program Information
- Points of Contact
- APB Dates
- Mission & Description
- Executive Summary
- Threshold Breaches
- Assessments
- Schedule
- Performance
- Track to Budget
- Cost & Funding
- Low Rate Initial Production
- Foreign Military Sales
- Nuclear Costs
- Unit Cost
- Contracts
- Deliveries & Expenditures
- Operating & Support Costs
- Sustainment

Data Source

- ☒ DAES/Web Services
- ☐ SAR
- ☐ APB
- ☐ SAR Baseline
- ☐ POM
- ☐ BES

10/13/2011

Operating & Support Costs for AIM-9X (PNO: 581)  
from DAES/Web Services as of 10/13/2011

Costs	BY1997 \$M			TY \$M		
	Initial Prod APB	Current APB Objective/Threshold	Current Estimate	Initial Prod APB	Current APB Objective	Current Estimate
Total Acquisition	2464.0	2856.2	N/A	3232.9	3666.8	3754.7
O&S	--	--	--	--	--	3851.0
Total Life Cycle	N/A	N/A	N/A	N/A	N/A	7605.7

Current APB Source: DAMIR MAY 2010 APB

Initial APB Source: DAMIR MAY 2004 APB

Current Estimate O&S Cost Source: Navy Dashboard 8/3/2011

Current Estimate Total Acquisition Cost Source: Navy Dashboard 8/3/2011

"Total Required Acq (BY\$M)"

"Total Required O&S (BY\$M)"

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# PAUC and APUC Data

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- ☐ SAR Baseline
- ☐ POM
- ☐ BES

10/13/2011

Unit Cost for AIM-9X (PNO: 581)  
from DAES/Web Services as of 10/13/2011

“Current”

“Δ Current”

Unit Cost	BY1997 \$M Current UCR Baseline (MAY 2010 APB)	BY1997 \$M Current Estimate (AUG 2011 Navy Dashboard)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2856.2	2939.3	
Quantity	10142	10142	
Unit Cost	0.282	0.290	+2.77
Average Procurement Unit Cost (APUC)			
Cost	2232.7	2287.9	
Quantity	10097	10097	
Unit Cost	0.221	0.227	+2.53

Unit Cost	BY1997 \$M Original UCR Baseline (JAN 1997 APB)	BY1997 \$M Current Estimate (AUG 2011 Navy Dashboard)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2464.0	2939.3	
Quantity	10049	10142	
Unit Cost	0.245	0.290	+18.29
Average Procurement Unit Cost (APUC)			
Cost	1932.6	2287.9	
Quantity	10000	10097	
Unit Cost	0.193	0.227	+17.41

Current Estimate Source: Navy Dashboard 8/3/2011  
UCR Source: urn:us:mil:osd:acq:damir:unofficial 5/8/2010  
Original UCR Source: urn:us:mil:osd:acq:damir:unofficial 1/15/1997

“Δ Original”

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